

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

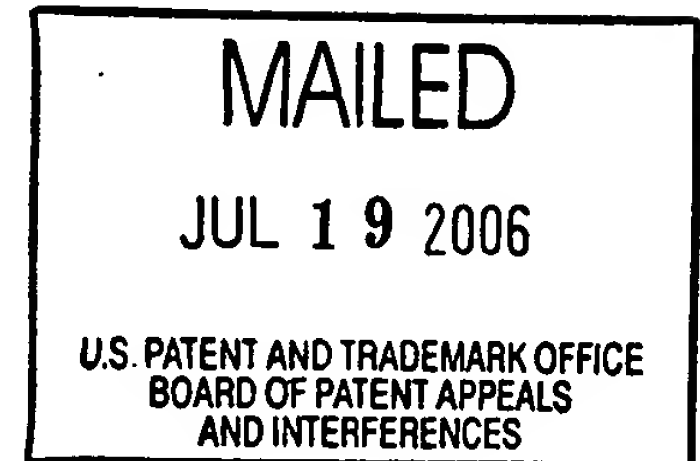
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GABRIEL RAVIV, RON ROLFSEN and
ROBERT TARASEWICZ

Appeal No. 2006-1688
Application 09/901,244

ON BRIEF



Before OWENS, BAHR and FETTING, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from a rejection of claims 60-72, which are all of the pending claims.

THE INVENTION

The appellants claim an ear probe tip having a passage therethrough for insertion of a probe. Claim 60 is illustrative:

60. An ear probe tip for a probe which can be inserted into an ear canal, the probe having an outer surface, a length to be covered by the ear probe tip and a probe end, the ear probe tip comprising:

a body portion of substantially the same length as the length of the probe to be covered and having a first end and a second end;

a passage formed within the body portion, the passage having a first opening at the first end, a second opening at the second end and a surface extending within the body portion between the first opening and the second opening, the passage being configured to receive the probe such that when the probe is received within the passage the surface is disposed about the probe, is substantially in contact with the probe along the length to be covered and the second opening is proximate to the probe end;

an outer surface of the body portion; and

a plurality of annular flanges formed on the outer surface, each of the plurality of annular flanges having a diameter, the diameter of adjacent annular flanges decreasing in size from the first end toward the second end.

THE REFERENCES

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|--------------------------|-----------|---------------|
| Baum | 2,487,038 | Nov. 8, 1949 |
| Kerouac | 4,057,051 | Nov. 8, 1977 |
| Ochi et al. (Ochi) | 4,540,063 | Sep. 10, 1985 |
| Killion et al. (Killion) | 5,113,967 | May 19, 1992 |

THE REJECTIONS

The claims stand rejected as follows: claims 60-72 under 35 U.S.C. § 102(b) as anticipated by Baum; claims 60-72 under 35 U.S.C. § 102(b) as anticipated by Ochi; claims 60-65 and 70-72 under 35 U.S.C. § 102(b) as anticipated by Killion; claims 60-65 and 70-72 under 35 U.S.C. § 103 as obvious over Kerouac in view of Baum; and claims 63 and 70 as being indefinite under 35 U.S.C. § 112, second paragraph.

OPINION

We affirm the aforementioned rejections.

Regarding the rejections over prior art, the appellants argue only the sole independent claim, i.e., claim 60 (brief, pages 12-18). We therefore limit our discussion to that claim. See 37 CFR § 41.37(c)(1)(vii)(2004).

Rejection under 35 U.S.C. § 102(b) over Baum

Baum discloses an "acoustic insert for acoustically coupling a sound outlet opening of a sound transmitting device, such as a hearing-aid earphone, to the ear canal of a person, and prevent[ing] direct transmission of sound thereto" (col. 1, lines 3-7).

The appellants argue that the claimed ear probe tip must be configured such that a probe has a length to be covered by the ear probe tip and has an end that is proximate to an opening in the ear

probe tip (brief, pages 12-14). The appellants acknowledge that the probe is not part of the claimed invention (brief, page 14). Baum's ear insert (11) has first and second ends, each with an opening, and a passage (20) between the openings that is capable of having inserted through it a probe that has a length covered by the ear insert and has an end that is proximate to the second opening of the ear insert (figure 1). Baum's ear insert also has a plurality of annular flanges, the diameter of adjacent flanges decreasing in size from the first end to the second end (figure 1).

The appellants argue that Baum's sound outlet knob (13) can extend only a short distance into the ear insert and, therefore, cannot be proximate the second end of the ear insert (brief, page 14). The portion of Baum's device that corresponds to the appellants' ear probe tip is the ear insert (11). The ear insert has a passage which, when the sound outlet knob is not inserted into the ear insert, can have a probe inserted through it.

For the above reasons we find that the appellants' claimed invention is anticipated by Baum.

Rejection under 35 U.S.C. § 102(b) over Ochi

Ochi discloses "an earplug capable of attenuating sound waves of multiple frequency bands" (col. 1, lines 7-8).

The appellants argue that "Ouchi [sic] does not disclose a body portion substantially the same length as a probe of any sort, let alone a body portion having a second opening arranged to be proximate to a probe end.... The sound wave attenuation unit would prevent a probe from being covered by the Ouchi [sic] device, much less allow the Ouchi [sic] device to have a second opening 'proximate to the probe end' as is recited in claim 60" (brief, pages 15-16). Ochi's ear plug proximal end (16), which is "detachably attached" to a distal member (14) which includes the sound wave attenuation unit (22) referred to by the appellants (col. 2, lines 31-33; col. 3, lines 63-64), has first and second ends, each with an opening, and a passage between the ends through which a probe can be inserted, either before the distal member is attached to the ear plug proximal end or after it has been detached therefrom, such that the passage is substantially in contact with the probe along a length of the probe to be covered (figure 5). Also, Ochi's ear plug proximal end has a plurality of annular flanges, the diameter of adjacent flanges decreasing in size from the first end to the second end. See *id.*

We therefore find that the appellants' claimed invention is anticipated by Ochi.

Rejection under 35 U.S.C. § 102(b) over Killion

Killion discloses "devices for providing hearing protection from exposure to sounds that are intense enough to risk hearing damage or discomfort" (col. 1, lines 6-9).

The appellants argue that "Killion not only fails to disclose an ear probe tip, or a probe of any sort, but includes the very structure that the present invention was designed to eliminate, namely a sound (acoustic) channel" (brief, page 16), and that the sound channel "eliminates the possibility that a probe end could be 'proximate' a second opening" (brief, page 17). The appellants' argument is directed toward Killion's fully assembled ear plug. Killion's eartip (30) itself (figure 4A), when not assembled with the other ear plug components shown in figure 5, has an opening at each end and a passage therebetween which is capable of having a probe inserted through it such that an end of the probe is proximate an opening in the eartip. Moreover, the eartip includes a plurality of annular flanges, the diameter of adjacent flanges decreasing in size from the first end to the second end (figure 4A).

We therefore find that the appellants' claimed invention is anticipated by Killion.

*Rejection under 35 U.S.C. § 103
over Kerouac in view of Baum*

Kerouac discloses "a hand held test probe for use with ear test equipment" (col. 1, lines 5-6).

The examiner argues that "it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to *provide the outer surface of an ear probe tip similar to that of Kerouac with a plurality of annular flanges in view of the teachings of Baum* in order to automatically provide an acoustic seal with the outer ear cavity that prevents propagation of sound through the space of the ear cavity surrounding the exterior of the ear probe tip [Baum, col. 4, lines 10-17], where the probe tip of Kerouac would remain disposed proximate the second opening of the ear insert of Kerouac as illustrated in Figures 2 and 8 of Kerouac" (answer, page 12).¹ The appellants argue that "if the ear insert of Baum were used with the ear probe of Kerouac, the probe tip of Kerouac would not be disposed proximate the second opening of the ear insert of Baum" (brief, page 17).

¹ The resilient cuff (12) used by Kerouac provides an air-tight or hermetic seal with the canal (9) walls (col. 2, lines 19-22).

As indicated by the above argument by the examiner, the examiner is not relying upon inserting Baum's ear insert into Kerouac's ear probe. Instead, the examiner is combining Baum's annular flanges with Kerouac's ear probe that includes a resilient cuff (12) with a conduit (3), corresponding to the appellants' probe, through a passage in the cuff such that the passage is substantially in contact with the probe along a length, and an end of the passage is proximate to a probe end (figure 8).

The appellants argue that there is no motivation to combine Kerouac and Baum because Kerouac does not recognize the problem of multiple ear shapes and sizes (brief, page 17). That problem is recognized by Baum (col. 1, lines 47-50). Baum solves the problem by using thin flexible skirt-like protrusions (41, 42, 43), which are comparable to the appellants' annular flanges, which wedge against the surrounding surfaces of outer ear cavities of different shapes and configurations to automatically establish therewith a foolproof acoustic seal which prevents propagation of sound through the space surrounding the exterior of the ear insert (col. 1, lines 1-7; col. 4, lines 4-22). The motivation for combining this teaching by Baum with Kerouac's disclosure would have been to provide a foolproof acoustic seal between Kerouac's ear cuff and outer ear cavities having different shapes and configurations.

Accordingly, we are not convinced of reversible error in the rejection over Kerouac in view of Baum.

*Rejection of claims 63 and 70 under
35 U.S.C. § 112, second paragraph*

Claim 63 requires that "the annular flange comprises a substantially circular shape", whereas claim 60, from which claim 63 depends, recites "a plurality of annular flanges". The examiner argues that "[i]t is unclear whether each of the plurality of annular flanges has a substantially circular shape or merely one of the flanges" (office action mailed July 28, 2004, page 4). "The applicants submit that the language is clear and that at least one of the plurality of flanges is substantially circular" (answer, page 18).

The appellants' interpretation of claim 63 is plausible and consistent with the appellants' original disclosure. However, another plausible interpretation that is consistent with the appellants' original disclosure is that "the annular flange" refers to each of the plurality of flanges. The support for that interpretation is the appellants' disclosure that the flanges may have virtually any shape, including circular (specification, page 7, lines 3-5; figure 1), and lack of disclosure that the shape of one

flange can differ from that of another flange. Because claim 63 has two plausible, conflicting interpretations, the claim is indefinite.

Claim 70 depends from claim 60 and requires that "the second end extends past the probe end a distance, the distance the second end extends past the probe being sufficient to prevent the probe end from contacting a patient's ear upon insertion of the probe into the patient's ear canal and insufficient to form a portion of the acoustic path from the probe end into the patient's ear canal."

The examiner argues that "[c]laim 70 is indefinite because it is unclear whether Applicant is attempting to claim the combination of an ear probe tip and a probe or merely the subcombination of an ear probe tip" (office action mailed July 28, 2004, page 4). In the examiner's view, "claim 70 uses claim language that indicates that the probe is positively disposed within the tip." See *id.*

The appellants argue that "[t]he reference to the ear probe is made only to structurally define the ear probe tip" (brief, page 18).

Because the limitation in claim 70 requiring that the second end extends past the probe end does not refer to the "when the probe is received within the passage" limitation in claim 60, and is not similarly qualified, it is unclear whether that claim 70 limitation refers to the relationship between the second end and the probe end

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when the probe is received within the passage, or adds an additional requirement of a probe as part of the claimed ear probe tip.

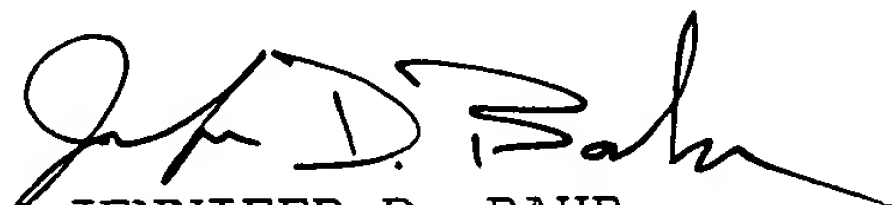
DECISION


The rejections of claims 60-72 under 35 U.S.C. § 102(b) over Baum, claims 60-72 under 35 U.S.C. § 102(b) over Ochi, claims 60-65 and 70-72 under 35 U.S.C. § 102(b) over Killion, claims 60-65 and 70-72 under 35 U.S.C. § 103 over Kerouac in view of Baum, and claims 63 and 70 under 35 U.S.C. § 112, second paragraph, are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED


TERRY J. OWENS
Administrative Patent Judge)


JENNIFER D. BAHR
Administrative Patent Judge)


ANTON W. FETTING
Administrative Patent Judge)

) BOARD OF PATENT
) APPEALS
) AND
) INTERFERENCES
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